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Continuity Information for 10/628734

Parent Data

10628734
is a continuation in part of 09447966

Child Data

PCT/US03/35460 **is a continuation of** 10628734

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Inventor Information for 10/628734

Inventor Name	City	State/Country
WOLFF, JON A.	MADISON	WISCONSIN
MONAHAN, SEAN D.	MADISON	WISCONSIN
HAGSTROM, JAMES E.	MIDDLETON	WISCONSIN
ROZEMA, DAVID B.	MADISON	WISCONSIN
BUDKER, VLADIMIR G.	MIDDLETON	WISCONSIN
SLATTUM, PAUL M.	MADISON	WISCONSIN

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Application Number Information

Application Number: **09/000533** Order This File Assignments
Examiner Number: **75009 / WILSON, MICHAEL**
Filing or 371(c) Date: **12/30/1997**
Group Art Unit: **1632**
Effective Date: **12/30/1997**
Class/Subclass: **514/044.000**
Application Received: **12/30/1997**
Lost Case: **NO**
Pat. Num./Pub. Num: **/20020001574**
Interference Number:
Issue Date: **00/00/0000**
Unmatched Petition: **NO**
Date of Abandonment: **10/10/2001**
L&R Code: Secrecy Code:**1**
Attorney Docket Number:
Third Level Review: **NO**
Secrecy Order: **NO**
Status: **161 /ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION**
Status Date: **04/08/2002**
Confirmation Number: **5446**
Oral Hearing: **NO**
Title of Invention: **PROCESS OF DELIVERING A POLYNUCLEOTIDE TO A MUSCLE CELL VIA THE VASCULAR SYSTEM**

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
09000533	9200	10/03/2005	No Charge to Location	No Charge to Name	RAHMAN,MOHAMMAD	

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Day : Friday
Date: 4/14/2006

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Time: 08:34:42

Application Number Information

Application Number: **09/707117**
Assignments
Examiner Number: **75009 / WILSON, MICHAEL**
Filing or 371(c) Date: **11/06/2000**
Group Art Unit: **1632**
IFW IMAGE
Effective Date: **11/06/2000**
Class/Subclass: **514/044.000**
Application Received: **11/07/2000**
Lost Case: **NO**
Waiting for Response Desc.
Patent Number:
Interference Number:
Mail Misc Comm.
Issue Date: **00/00/0000**
Unmatched Petition: **NO**
Date of Abandonment: **00/00/0000**
L&R Code: Secrecy Code:**1**
Attorney Docket Number: **Mirus.018.02**
Third Level Review: **NO**
Secrecy Order: **NO**
Status: **41 /NON FINAL ACTION MAILED**
Status Date: **03/16/2006**
Confirmation Number: **8189**
Oral Hearing: **NO**
Title of Invention: **INTRAVASCULAR DELIVERY OF NUCLEIC ACID**

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Appln Info | Contents | Petition Info | Atty/Agent Info | Continuity Data | Foreign Data | Inv

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1: Mol Ther. 2002 Nov;6(5):576-83.

ELSEVIER FULL-TEXT ARTICLE

Related Articles, Links

Transcutaneous ultrasound augments naked DNA transfection of skeletal muscle.

Schratzberger P, Krainin JG, Schratzberger G, Silver M, Ma H, Kearney M, Zuk RF, Brisken AF, Losordo DW, Isner JM.

Department of Cardiovascular Research, St. Elizabeth's Medical Center, Tufts University School of Medicine, Boston, Massachusetts 02135, USA.

This study was designed to test the hypothesis that transcutaneous ultrasound (US) exposure may augment the transfection efficiency and biological outcome associated with nonviral DNA gene transfer. Hindlimb muscles of New Zealand White rabbits were transfected with the reporter plasmid pCMV-beta, with or without US exposure. Optimization studies employed US exposure at various frequencies, mechanical indices, duty cycles, durations of exposure, and exposure time points. Based on these results, we explored the effect of US exposure on nonviral gene transfer of vascular endothelial growth factor (VEGF, phVEGF165) to promote neovascularization of ischemic hindlimbs. Ultrasound at 1 MHz, 100 W/cm (2), 6% duty cycle, and 5 minutes exposure time, applied immediately following DNA injection, was found to be the most effective among the settings tested, increasing beta-galactosidase expression approximately 20 fold. Compared with US exposure alone, or phVEGF165 only, phVEGF165 + US exposure yielded a statistically significant improvement in revascularization, as determined by calf blood pressure ratio, angiographic score, intravascular Doppler blood flow, and capillary/myocyte ratio. These data demonstrate that ultrasound, when applied directly after intramuscular gene transfer, significantly increases transfection efficiency in vivo. The biological significance of this finding was confirmed by augmented limb perfusion in response to US exposure and naked VEGF DNA.

PMID: 12409255 [PubMed - indexed for MEDLINE]

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	"6627616".pn.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:12
L2	1	"6627616".pn. and VEGF	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:14
L3	2434	muscle and vascularization and vegf	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:15
L4	2439	muscle and vascularization and (vegf or veg)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:15
L5	16	(muscle and vascularization and (vegf or veg)).clm.	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:17
L6	111	(muscle SAME (revascularization or vascularization)) same (vegf or veg)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:17

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	"6627616".pn. and angiogenic	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:25
L2	0	"6627616".pn. and vascularization	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:25
L3	0	"6627616".pn. and (revascularization or re-vascularization)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:26
L4	0	"6627616".pn. and (vessel with formation)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:26
L5	0	"6627616".pn. and (flow with improving)	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:26
L6	0	"6627616".pn. and (flow with (increase or increases))	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/04/14 08:27

(34) In another preferred embodiment, the permeability of the blood vessel can also be increased by a biologically-active molecule. A biologically-active molecule is a protein or a simple chemical such as papaverine or histamine that increases the permeability of the vessel by causing a change in function, activity, or shape of cells within the vessel wall such as the endothelial or smooth muscle cells. Typically, biologically-active molecules interact with a specific receptor or enzyme or protein within the vascular cell to change the vessel's permeability. Biologically-active molecules include vascular permeability factor (VPF) which is also known as vascular endothelial growth factor (**VEGF**). Another type of biologically-active molecule can also increase permeability by changing the extracellular connective material. For example, an enzyme could digest the extracellular material and increase the number and size of the holes of the connective material.